

Office Action Summary

Application No.

09/843,165

Applicant(s)

KOBAYASHI ET AL.

Examiner

Vu A. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/043,889.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/07/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Reissue Applications

1. The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.
2. The reissue oath/declaration filed with this application is defective because it fails to identify each inventor by full name, and country of citizenship as required by 35 U.S.C. 115 and 37 CFR 1.63 (a)(3). Each inventor's residence and mailing address must also be provided, if they have not been supplied in the application data sheet. When filed by the assignee, the required information must be present, even if it is asserted that it is based on the last available information known to assignee ("upon information and belief").
3. The reissue oath/declaration filed with this application is defective because it fails to contain a statement that all errors which are being corrected in the reissue application up to the time of filing of the oath/declaration arose without any deceptive intention on the part of the applicant. See 37 CFR 1.175 and MPEP § 1414.
4. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

New claims 3-11 are presented in the reissue application. However, these claims are not state in the declaration and their differences of these claims from the original claims are not pointed out. See MPEP 1414.

5. Claims 1-11 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

6. Claims 3-11 are rejected under 35 U.S.C. 251 as being improperly broadened in a reissue application made and sworn to by the assignee and not the patentee. A claim is broader in scope than the original claims if it contains within its scope any conceivable product or process which would have infringed the original patent. A claim is broadened if it is broader in any one respect even though it may be narrower in other respects.

7. Claims 3-11 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Hester Industries, inc v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United Stated*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the

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narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent can not be recaptured by the filing of the present reissue application.

8. In the original application (08/841,372), applicants' amendments filed on 06/16/98 and 09/24/98 in which the limitation "formed of metal wiring" is added to a main bit line and "of metal wiring and aligned" is added to first and second subbit lines in claim 61-62 to overcome the rejection. In the remarks, applicants stated that these limitations are distinct from the prior art. However, in the present reissue application, these limitations are omitted in the new independent claims 3-11. Thus, they are improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based, In other word, recapture based on claim limitations added in original application to overcome prior art.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 3, 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yiu et al (5,526,307).

11. With respect to claim 3, Yiu et al (Figures 1 and 2) disclose a nonvolatile semiconductor memory device (100, Fig.1 and Fig.2), comprising: a main bit line (84), first and second subbit lines (80 upper part and lower part) connected in series, each aligned parallel to said main bit line; first and second switching transistors (82 upper part and lower part), each for connecting said main bit line to a corresponding one of said first and second subbit lines (see Fig.2); a first memory cell group (76-N) including n ($n \geq 2$) memory_ cells, each connected to said first subbit line, wherein each of said memory cells includes a control gate, a floating gate, a drain and a source, and each of said memory cells is connected to a corresponding one of said first and second subbit lines via said drain, said device further comprising: n connection lines (WL1), each for connecting the control gate of a relevant memory cell (76-N upper part) in said first memory cell group to the control gate of a corresponding memory cell (76-N lower part)

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in said second memory cell group; and a row decoder (104, Fig.1), responsive to an externally applied address signal for selecting one of said n connection lines.

12. With respect to claims 5-9, Yiu et al (Figures 1 and 2) disclose a nonvolatile semiconductor memory device (100, Fig.1 and Fig.2), comprising a first bit line (84, Fig.2, Main bit line) including a metal film (col.7, line 24); a switch (82) having an end connected to said first bit line (84); a second bit line (sub-bit line 80) including polycrystalline silicon and connected to other end of said switch; and a plurality of memory cells (76-N) connected to said second bit line, each including a drain, a control gate, a floating gate and a source, a source line (78) formed with an active layer, to which said sources of said memory cells are commonly connected, wherein said first bit line is placed in an upper layer of said second bit line.

13. Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Tickle (4,377,857).

Tickle (Fig.10 discloses a nonvolatile semiconductor memory device, comprising: a plurality of memory cells (12) arranged in rows and columns (Fig.1); a plurality of word lines (L1-Lx) provided corresponding to said rows; a plurality of bit lines (M1-Mj) provided corresponding to said columns; and a source line (N1-Nj) provided commonly for said plurality of memory cells, wherein each of said memory cells includes a control gate connected to corresponding said word line, a drain connected to corresponding said bit line, a source connected to said source line, and a floating gate, and electrons are extracted from the floating gate of each said memory cell via the drain of said memory cell (see col.9, lines 19-20),

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wherein the nonvolatile semiconductor memory device further comprising an electron extracting means for extracting the electrons from the floating gate of selected said memory, cell, said electron extracting means including means for applying a prescribed positive voltage to the selected bit line, and means for applying a prescribed voltage to the selected word line (see table 2).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Challa (5,197,027) disclose a single transistor EEPROM architecture.
16. Ma et al (5,278,439) disclose a dual bit split gate flash EEPROM cell.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu A. Le whose telephone number is (571) 272-1871. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vu A. Le
Primary Examiner
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01/18/08